

Amendment to the Claims:

This listing of claims will replace all versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A multiphase reactor configured to facilitate contact between a first fluid and a second fluid, comprising a reactor shell, wherein a rotary build-in member comprising a ~~rotator~~ an axisymmetric body and an annular ~~rotator~~ axisymmetric body is installed inside the reactor shell wherein the annular axisymmetric body is settled on the reactor shell, the ~~rotator~~ axisymmetric body and annular ~~rotator~~ axisymmetric body are formed by rotating a single curved line, as a generatrix, with the exception of straight lines, [[round]] around the axis.

2. (Currently Amended) A multiphase reactor according to claim 1, wherein the said reactor shell is in a cylinder shape with a smooth inner surface, or an inner surface waved transversely or longitudinally, and the waved inner surface [[can be]] is formed by rotating a curved line or a ~~poly-line~~ polyline.

3. (Currently Amended) A multiphase reactor according to claim 1, wherein the structure of [[the]] said rotary build-in member are as follows: the annular ~~rotator~~ axisymmetric body (3) is settled on the reactor shell (1) and formed by rotating a straight line and a curved line ~~round-around~~ around the rotation axis, wherein the straight line is parallel to the rotation axis, and the two ends of the curved line are connected with the two ends of the straight line respectively, and the straight line and the curved line are within the same plane, the curved line is with the exception of straight lines; the distance between the straight line and the rotation axis is longer than that between the curved line and the rotation axis; correspondingly, the ~~rotator~~ axisymmetric body (2) is mounted on the annular ~~rotator~~ axisymmetric body, and is formed by rotating the curved line [[round]] around the rotation axis, the curved line's two ends are connected with the two ends of the rotation axis respectively, and the curved line and the rotation axis are within the same plane; the ~~rotator~~ axisymmetric body and the annular ~~rotator~~ axisymmetric body are coaxial.

4. (Currently Amended) A multiphase reactor according to claim 1, wherein the maximum diameter Φ_{DA} of ~~[[the]]~~ said ~~rotator~~ axisymmetric body (2) is not less than the inner diameter of the annular ~~rotator~~ axisymmetric body Φ_{DB} .

5. (Currently Amended) A multiphase reactor according to claim 1, wherein the rotary build-in member comprising the ~~rotator~~ axisymmetric body (2) and the annular ~~rotator~~ axisymmetric body (3) as well as their corresponding shell are integrated together to form a unit; several such units ~~[[can be]]~~ are mounted in the reactor from the top to the bottom.

6. (Currently Amended) A multiphase reactor according to claims 1 wherein the reactor shell, the ~~rotator~~ axisymmetric body and the annular ~~rotator~~ axisymmetric body are manufactured separately, then installed ~~[[them]]~~ as desired by welding, riveting, screwing or bolting; or installed ~~[[them]]~~ as a reaction unit in a way of one-spot molding; or the ~~rotator~~ axisymmetric body and a corresponding section of the shell are installed together in a way of one-shot molding, and the annular ~~rotator~~ axisymmetric body and its corresponding section of the shell are installed together in a way of one-shot molding, then the two parts above-mentioned are connected together into an unit by welding, riveting, screwing, flanged connection, or by bell and spigot joint.

7. (Currently Amended) A multiphase reactor according to claim 5, wherein the units ~~[[can be]]~~ are connected together in order by welding, riveting, bolting, flanged connection, or by bell and spigot joint.